

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/40056

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C02F1/28 C02F1/52 B01J20/06 B01J20/32 B01J20/34 B01D24/28 B01D24/36 B01D24/46		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C02F B01J B01D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 471 277 A (C F BURGESS LAB INC) 1 September 1937 (1937-09-01) page 1, line 63-71, 93-106 page 3, line 94-103 page 4, line 71-96 ---	1
X	US 6 132 623 A (NIKOLAIDIS NIKOLAOS P ET AL) 17 October 2000 (2000-10-17) claims 1,2,6 column 2, line 48-59 column 5, line 7-14, 50-59 ---	1,2,11
X	DE 27 24 254 A (BBC BROWN BOVERI & CIE) 9 November 1978 (1978-11-09) claim 1; example 3 page 3, line 11 -page 4, line 3 --- -/--	1-22
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents:		
A document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *&* document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
27 April 2004		06/05/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Harf, J

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/40056

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 426 005 B1 (LARSSON HANS F) 30 July 2002 (2002-07-30) figure 1 column 2, line 1-20 column 5, line 44 -column 7, line 10 ---	23-30
X	US 4 126 546 A (HJELMNER ULF R ET AL) 21 November 1978 (1978-11-21) figure 1 column 1, line 51-66 column 3, line 29-38 ---	23-30
A	US 5 369 072 A (CHANG YU-JUNG ET AL) 29 November 1994 (1994-11-29) cited in the application column 3, line 46-64 column 4, line 29-39 column 6, line 1-4 column 9, line 17-22 column 10, line 40-44 column 14, line 55-58 ---	1-22
A	US 3 499 837 A (JAUNARAJIS KARLIS LAIMONIS) 10 March 1970 (1970-03-10) claims 1,10 column 2, line 34-48 column 2, line 57-64 column 3, line 61-69 ---	1-30
A	US 6 468 942 B1 (SANSALONE JOHN J) 22 October 2002 (2002-10-22) column 1, line 46-57 column 2, line 44-48 column 4, line 42,43 column 6, line 5-28 column 6, line 61 -column 7, line 6 ---	1-30
A	US 4 366 128 A (WEIR DONALD R ET AL) 28 December 1982 (1982-12-28) claim 1 column 1, line 27-35 column 2, line 19-31 ---	22
A	US 5 173 194 A (HERING JR CARL J) 22 December 1992 (1992-12-22) figure 1 -----	23,28

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/40056

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 471277	A	01-09-1937	NONE	
US 6132623	A	17-10-2000	US 6387276 B1 AU 8259098 A CA 2293656 A1 EP 0991595 A1 WO 9857893 A1	14-05-2002 04-01-1999 23-12-1998 12-04-2000 23-12-1998
DE 2724254	A	09-11-1978	DE 2724254 A1	09-11-1978
US 6426005	B1	30-07-2002	AU 4896201 A AU 754359 B2 AU 5545701 A BR 0106070 A CA 2376616 A1 CN 1380835 T EP 1229980 A2 NO 20016142 A WO 0178864 A1 WO 0179117 A2	30-10-2001 14-11-2002 30-10-2001 14-05-2002 25-10-2001 20-11-2002 14-08-2002 17-12-2001 25-10-2001 25-10-2001
US 4126546	A	21-11-1978	US 4197201 A	08-04-1980
US 5369072	A	29-11-1994	US 5911882 A	15-06-1999
US 3499837	A	10-03-1970	NONE	
US 6468942	B1	22-10-2002	AU 3766102 A CA 2429510 A1 EP 1341970 A2 WO 0244088 A2 US 2002090261 A1	11-06-2002 06-06-2002 10-09-2003 06-06-2002 11-07-2002
US 4366128	A	28-12-1982	CA 1139466 A1 AU 542073 B2 AU 7315981 A DE 3132126 A1 FR 2488869 A1 GB 2082564 A ,B JP 1003550 B JP 1526029 C JP 57059686 A ZA 8105308 A	11-01-1983 07-02-1985 25-02-1982 08-04-1982 26-02-1982 10-03-1982 23-01-1989 30-10-1989 10-04-1982 25-08-1982
US 5173194	A	22-12-1992	NONE	